

CLAIMS

What is claimed is:

1. A method for operating a wireless communication system having packet data capabilities, comprising:

sending a message from a mobile station to a network on a same physical channel that is used to transmit packet data, the message specifying individual ones of packet system information (PSI) messages that are required for reception by the mobile station; and

in response to receiving the message, sending only the specified individual ones of the PSI messages from the network to the mobile station over the same physical channel used to transmit the packet data.

2. A method as in claim 1, wherein the message is a PACKET PSI STATUS message.

3. A method as in claim 1, wherein the physical channel conveys a Packet Associated Control Channel (PACCH).

4. A method as in claim 1, wherein the operations of sending the message and transmitting the PSI messages occur during a packet data transfer mode without suspending an established Temporary Block Flow (TBF).

5. A method as in claim 2, wherein the mobile station fills the Packet PSI Status message by including fields PSIx_COUNT and Instance_Bitmap, and by setting their respective fields to zero for the particular PSI message type in the PACKET PSI STATUS message.

6. A method as in claim 5, wherein, in response, the network determines that the mobile station has not received the particular PSI message type, and

disregards an indicated PSI_CHANGE_MARK in the PACKET PSI STATUS message.

7. A method for operating a wireless communication network having packet data capabilities, comprising:

receiving a message from a mobile station at the network on a same physical channel that is used to convey packet data, the message specifying individual ones of packet system information (PSI) messages that are required for reception by the mobile station; and

in response to receiving the message, sending only the specified individual ones of the PSI messages from the network to the mobile station over the same physical channel used to transmit the packet data.

8. A method as in claim 7, wherein the message is a PACKET PSI STATUS message.

9. A method as in claim 7, wherein the physical channel conveys a Packet Associated Control Channel (PACCH).

10. A method as in claim 7, wherein the operations of receiving the message and transmitting the PSI messages occur during a packet data transfer mode without suspending an established Temporary Block Flow (TBF).

11. A method as in claim 8, wherein the mobile station fills the Packet PSI Status message by including fields PSIx_COUNT and Instance_Bitmap, and by setting their respective fields to zero for the particular PSI message type in the PACKET PSI STATUS message.

12. A method as in claim 11, wherein, in response, the network determines that the mobile station has not received the particular PSI message

type, and disregards an indicated `PSI_CHANGE_MARK` in the `PACKET PSI STATUS` message.

13. A method for operating a wireless communication system having packet data capabilities, comprising:

sending a `PACKET PSI STATUS` message from a mobile station to a network, the `PACKET PSI STATUS` message specifying individual ones of packet system information (PSI) message types that are required for reception by the mobile station; and

in response to receiving the `PACKET PSI STATUS` message, sending only the specified individual ones of the PSI message types from the network to the mobile station.

14. A method as in claim 13, wherein sending the `PACKET PSI STATUS` message comprises including message fields `PSIx_COUNT` and `Instance_Bitmap`, and setting respective fields to zero for specifying to the network associated ones of PSI message types.

15. A method as in claim 14 wherein, in response, the network determines that the mobile station has not received the particular PSI message type, and disregards an indicated `PSI_CHANGE_MARK` in the `PACKET PSI STATUS` message.

16. A method as in claim 13, wherein sending the `PACKET PSI STATUS` message comprises indicating mobile station-supported PSI message types in a `Received PSI Message List` in the `PACKET PSI STATUS` message.

17. A method as in claim 13, wherein the mobile station indicates in the `PACKET PSI STATUS` message, for each PSI message type for which the mobile station desires a `PSI CHANGE MARK` value, the present status of the PSI message type and that the PSI message type has not been received.

18. A method as in claim 17, wherein the mobile station desires the PSI CHANGE MARK value at least during a partial acquisition of PSI messages.

19. A method as in claim 13, wherein the PSI message types that are required for reception by the mobile station are those meeting the following criteria:

those PSI message types that the mobile station considers relevant based on the features that the mobile station supports; and,

for optional PSI message types, the PSI message type has been indicated by the network as present on a Packet Broadcast Control Channel.

20. A mobile station operable with a wireless communication network having packet data capabilities, the mobile station comprising a RF transceiver coupled to a data processor, said data processor operating under the control of a stored program for transmitting a PACKET PSI STATUS message from the mobile station to the network, the PACKET PSI STATUS message specifying individual ones of packet system information (PSI) message types that are desired for reception by said mobile station and, in response a reception of said PACKET PSI STATUS message by said network, said mobile station receiving from said network only the specified individual ones of the PSI message types.

21. A mobile station as in claim 20, wherein when transmitting the PACKET PSI STATUS message said data processor includes message fields PSIX_COUNT and Instance_Bitmap, and sets respective fields to zero for specifying to said network associated ones of PSI message types.

22. A mobile station as in claim 21 wherein said network determines from the included message fields that said mobile station has not received the particular PSI message type, and disregards an indicated PSI_CHANGE_MARK in the PACKET PSI STATUS message.

23. A mobile station as in claim 20, wherein said data processor, when transmitting the PACKET PSI STATUS message, indicates mobile station-supported PSI message types in a Received PSI Message List in the PACKET PSI STATUS message.

24. A mobile station as in claim 20, wherein said data processor, when transmitting the PACKET PSI STATUS message, indicates in the PACKET PSI STATUS message, for each PSI message type for which a PSI CHANGE MARK value is desired, the present status of the PSI message type and that the PSI message type has not been received.

25. A mobile station as in claim 24, wherein said PSI CHANGE MARK value is desired at least during a partial acquisition of PSI messages.

26. A mobile station as in claim 20, wherein the PSI message types that are desired for reception by said mobile station are those meeting the following criteria:

those PSI message types that said mobile station considers relevant based on the features that said mobile station supports; and,

for optional PSI message types, the PSI message type has been indicated as being present by said network on a Packet Broadcast Control Channel (PBCCH).